

What Is Claimed Is:

1. A loop thermosyphon comprising an evaporator and a condenser that are interconnected in flow communication to one another by one conduit comprising a pair of concentrically arranged tubes.

2. A thermal bus arranged within an electronics system for transporting thermal energy in a directed manner comprising at least one loop thermosyphon comprising an evaporator and a condenser that are interconnected in flow communication to one another by one conduit comprising a pair of concentrically arranged tubes.

3. A thermal bus according to claim 2 wherein said pair of concentric tubes comprises an inner tube and an outer tube such that an annular void is defined between them so as to form a vapor transport space.

4. A thermal bus according to claim 3 wherein said inner tube comprises a melt-processable copolymer of tetrafluoroethylene.

5. A thermal bus according to claim 3 wherein said outer tube hermetically engages said condenser portion and said evaporator portion and said inner tube engages said condenser portion and said evaporator.

6. A thermal bus according to claim 4 wherein said condenser portion comprises a vapor vessel and a liquid vessel.

7. A thermal bus according to claim 6 wherein said liquid vessel comprises a liquid header and a vapor plenum that are separated by a bulkhead.

8. A thermal bus according to claim 7 wherein said vapor plenum is in flow communication with said vapor vessel.

9. A thermal bus according to claim 7 further comprising a port that passes through said bulkhead.

10. A thermal bus according to claim 3 wherein:
said vapor transport space is in flow communication with said vapor vessel,
said vapor plenum and said vapor conduit; and
said liquid header is in flow communication with said inner tube and a port.

11. A thermal bus according to claim 10 wherein said inner tube forms an interference fit with said port.

12. A thermal bus according to claim 10 wherein said port comprises a nipple.

13. A thermal bus according to claim 1 wherein said evaporator portion comprises a plurality of blade-evaporators that extend from a common manifold, wherein said common manifold is arranged in flow communication with each blade-evaporator and with said one conduit.

14. A thermal bus according to claim 13 wherein each blade-evaporator is joined to said common manifold so that vapor exits from each blade-evaporator to said common manifold and condensate is returned to said common manifold so as to be distributed to individual blade-evaporators.

15. A thermal bus according to claim 14 further comprising a vapor conduit hermetically engaged with said vapor plenum.

16. A thermal bus according to claim 15 further comprising a condensate conduit in flow communication with said liquid header.

17. A thermal bus according to claim 16 wherein said condensate conduit forms an interference fit with said fitting.

18. A thermal bus according to claim 17 wherein said fitting comprises a nipple.

19. A thermal bus arranged within an electronics system for transporting thermal energy in a directed manner comprising:

an evaporator and a condenser arranged in flow communication with one another through a conduit comprising an outer tube and an inner tube that are positioned in concentric relation to one another.

20. A thermal bus according to claim 19 wherein said evaporator and condenser are spaced apart and separated by at least one structure.

21. A thermal bus according to claim 19 wherein said outer tube comprises a pleated wall that is formed by a plurality of circumferential folds that are arranged in parallel spaced relation to one another.

22. A thermal bus according to claim 19 wherein said inner tube comprises at least one of Teflon FEP and Teflon PFA.